

In the claims:

1 1-20 (canceled)

1 21. (currently amended) A method of determining a parameter of interest of an earth
2 formation having a plurality of layers, the method comprising:
3 conveying a multi-component resistivity logging tool into a borehole ~~in a selected~~
4 ~~layer in said formation; and~~
5 using at least one transmitter receiver combinations and providing a measurement
6 ~~having selective sensitivity to~~ indicative of the parameter of interest; and
7 using a switchable aperture on a shield of the resistivity logging tool for providing
8 a selective sensitivity to the parameter of interest.

1 22. (currently amended) The method of claim 21, ~~wherein~~ further comprising using
2 ~~the measurement is used~~ for at least one of (i) geo-steering, and (ii) drilling
3 assistance and well placement decisions.

1 23. (currently amended) The method of ~~claim 21~~ claim 22 wherein the measurement
2 further comprises a measurement made with a multi-component array and
3 wherein using the measurement further comprising comprises measurement of a
4 ~~multi-component array combined~~ using a measurement made with measurement
5 ~~of at least one of: (i) a gyroscope, (ii) an accelerometer, (iii) a magnetometer, and~~
6 (iv) an inclinometer. a gyro, accelerometer, magnetometer and inclinometer.

1 24. (currently amended) The method of claim 21, further comprising:

2 performing dual compensated measurement of a multi-component array to
3 improve at least one of: (i) a signal to noise ratio, ~~and~~ (ii) measurement stability
4 and (iii) signal content with reservoir, geological and geophysical information.
5

1 25. (previously presented) The method of claim 21, further comprising providing a
2 measurement at a plurality of frequencies, and using the measurement at the
3 plurality of frequencies for determining the parameter of interest.
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1 26. (currently amended) The method of claim 21 ~~further comprising:~~
2 ~~performing multi-component transmitter-receiver array measurements at different~~
3 ~~orthogonal and non-orthogonal orientations comprising~~ wherein using the
4 switchable aperture further comprises making a measurement at least one of (i)
5 and xy orientation, (ii) an xz orientation, (iii) a yz orientation, (iv) a 20°-40°
6 orientation, and (v) a 40°-90° orientation.
7

1 27. canceled
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1 28. canceled
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1 29. (previously presented) The method of claim 21, wherein providing the
2 measurement further comprises:
3 measuring a time domain response; and
4 converting the time domain response into a frequency domain response.

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1 30. - 35 (canceled)

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1 36. (currently amended) The method of claim 21 ~~or 23~~, further comprising:

2 binning ~~measurement data~~ measurements made by the logging tool at a plurality
3 of rotational angles.

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1 37. (original) The method of claim 36 further comprising:

2 averaging depth intervals and azimuthal sectors for the binned measurement data.

3

1 38. (currently amended) The method of claim ~~36 or~~ 37 further comprising:

2 processing the binned measurement data; and

3 estimating or inverting formation drilling target parameters from the processed
4 binned measurement data from a given transmitter receiver array.

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1 39. (canceled) The method of claim 38, further comprising:

2 making a well placement plan along with a known reservoir drilling target model;

3 defining expected measurement response for a transmitter receiver array.

4

1 40. (canceled) The method of claim 39, further comprising:

2 making a drilling decision to continue or modify drilling plans based on

3 differences between inverted formation drilling target parameters obtained from

4 processed measured binned data and the expected measurements response based
5 on an initial drilling plan and reservoir parameter model.

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1 41. (canceled) The method of claim 21, wherein
2 a transmitter source is periodic with respect to both time domain and frequency
3 domain.

4

1 42. (canceled) The method of claim 37, wherein
2 raw data assigned to a depth interval and azimuth sector fall in different points
3 of a repeat cycle bin, the method further comprising,
4 averaging a time series having unequal time intervals between sampled points.

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1 43. (currently amended) The method of claim 21, where ~~the tool~~ rotation of the tool is
2 not synchronized with a transmitter repeat cycle.

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1 44. (canceled) The method of claim 21, wherein rotation of the logging tool is
2 synchronized with a transmitter repeat cycle.

3

1 45. (canceled) The method of claim 21, further comprising:
2 holding the tool stationary while raw data times are collected.

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1 46. (new) A method of determining a parameter of interest of an earth formation
2 having a plurality of layers, the method comprising:

3 conveying a multi-component resistivity logging tool into a borehole in said
4 formation;
5 using at least one transmitter receiver combinations and providing a measurement
6 indicative of the parameter of interest; and
7 using a magnetic lens for providing a selective sensitivity to the parameter of
8 interest.

9
1 47. (new) The method of claim 46, further comprising using the measurement for at
2 least one of (i) geo-steering, and (ii) drilling assistance and well placement
3 decisions

4
1 48. (new) The method of claim 46 wherein the measurement further comprises a
2 measurement made with a multi-component array and wherein using the
3 measurement further comprises using a measurement made with at least one of:
4 (i) a gyroscope, (ii) an accelerometer, (iii) a magnetometer, and (iv) an
5 inclinometer.

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1 49. (new) The method of claim 46 wherein using the magnetic lens further comprises
2 using a printed circuit board.

3
1 50. (new) An apparatus for determining a parameter of interest of an earth
2 formation having a plurality of layers, the apparatus comprising:
3 a multi-component resistivity logging tool conveyed into a borehole in said
4 formation;

5 at least one transmitter on the logging tool that is activated to produce an
6 electromagnetic field in the formation;
7 at least one receiver which provides a measurement indicative of the parameter of
8 interest; and
9 a switchable aperture on a shield of the resistivity logging tool which provides a
10 selective sensitivity to the parameter of interest.

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1 51. (new) An apparatus for determining a parameter of interest of an earth
2 formation having a plurality of layers, the apparatus comprising:
3 a multi-component resistivity logging tool conveyed into a borehole in said
4 formation;
5 at least one transmitter on the logging tool that is activated to produce an
6 electromagnetic field in the formation;
7 at least one receiver which provides a measurement indicative of the parameter of
8 interest; and
9 a magnetic lens on the resistivity logging tool which provides a selective
10 sensitivity to the parameter of interest.

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